SUBCORNEAL PUSTULAR DERMATOSIS

A Report of 2 Cases*

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We recently saw two patients who exhibited the same classic features as those described for so-called subcorneal pustular dermatosis by British authors (1). Dr. P. Samman of England observed one of our patients† and thought her eruption was similar to those he had seen in Great Britain. It appears that no one in America has reported this disease. If, indeed, this is a new entity, we would like to describe the eruptions we studied. These may be the first cases reported in Negroes.

Case 1

In a Negress, aged 30, four weeks after delivery of her baby, a superficial pustular eruption developed on the neck, which later spread to the axillary and popliteal areas, groins and trunk. Since then there have been several exacerbations and complete remissions. At the last exacerbation, the skin lesions were generalized. All parts except the hands, feet, face, scalp and mucous membranes were involved. Her general health has always been good, and she has not felt ill during any of the eruptive phases.

She was admitted to Cook County Hospital on June 13, 1957, with an extensive, superficial, discrete and confluent pustular eruption with arciform borders and clear centers. Crusts were present at the active borders of older lesions.

Dr. Fred Szymanski examined the histologic preparations and found subcorneal bullae containing numerous polymorphonucleor leukocytes and a few acantholytic cells at the bases. The corium was infiltrated by inflammatory cells.

On one occasion the culture of the pustular material yielded no growth. A second culture from new lesions showed coagulase-positive hemolytic *Staphylococcus aureus*. All other laboratory findings, including blood counts, urinalysis, serum test for syphilis and blood chemistry gave normal results.

The patient responded poorly, if at all, to general systemic and local therapy, including penicillin. There was a marked and favorable response to sulfisoxazole (Gantrisin®), 4 Gm. daily, after one week. Only postinflammatory hyperpigmentation remained.

Case 2‡

A Negro housewife, aged 34, otherwise well, has had a chronic, moderately pruritic skin eruption for the past 5 years. Although there had been remissions and exacerbations of the lesions, at no time was there complete clearing. Her first lesions appeared on the inner aspects of the thighs followed by similar ones in the axillae and on the neck. The hands, feet, face and mucous membranes were never involved. She had not received internal medication.

Fig. 1

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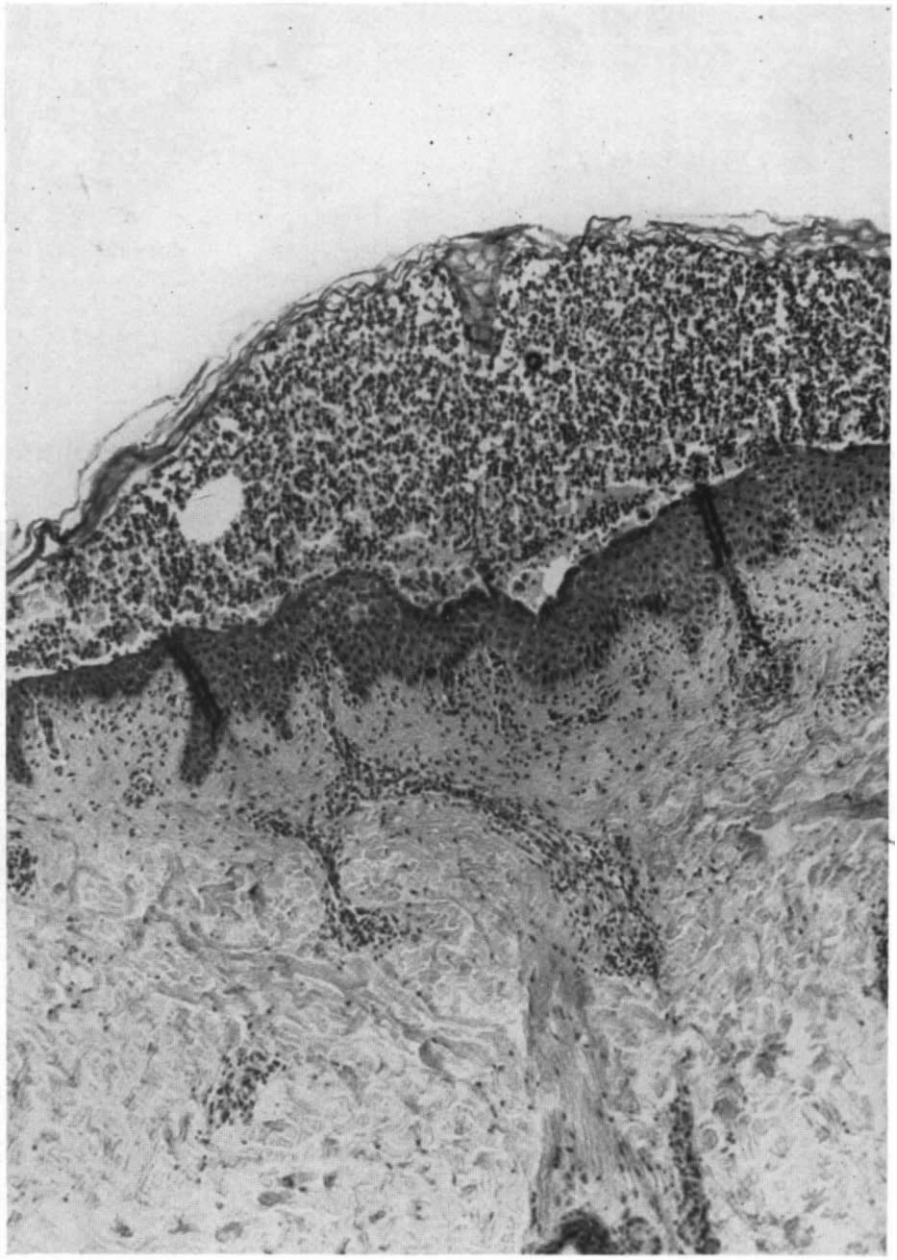

FIG. 2

She was admitted to Cook County Hospital on March 28, 1958, with grouped superficial vesiculopustular lesions having circinate and serpiginous borders, central clearing and crust formation.

Dr. Fred Szymanski examined biopsy sections and found subcorneal bullae containing numerous polymorphonuclear leukocytes. Some acantholytic cells were present at the bases of bullae. A moderate perivascular lymphocytic and polymorphonuclear leukocytic infiltrate was seen in the upper one third of the corium.

Cultures from the vesicles were negative for organisms. Laboratory findings, including blood counts, blood chemistry, urinalysis and serum tests for syphilis, were normal.

Antibacterial therapy, both local and systemic, had no beneficial effect on the lesions. There was, however, a prompt and almost complete clearing

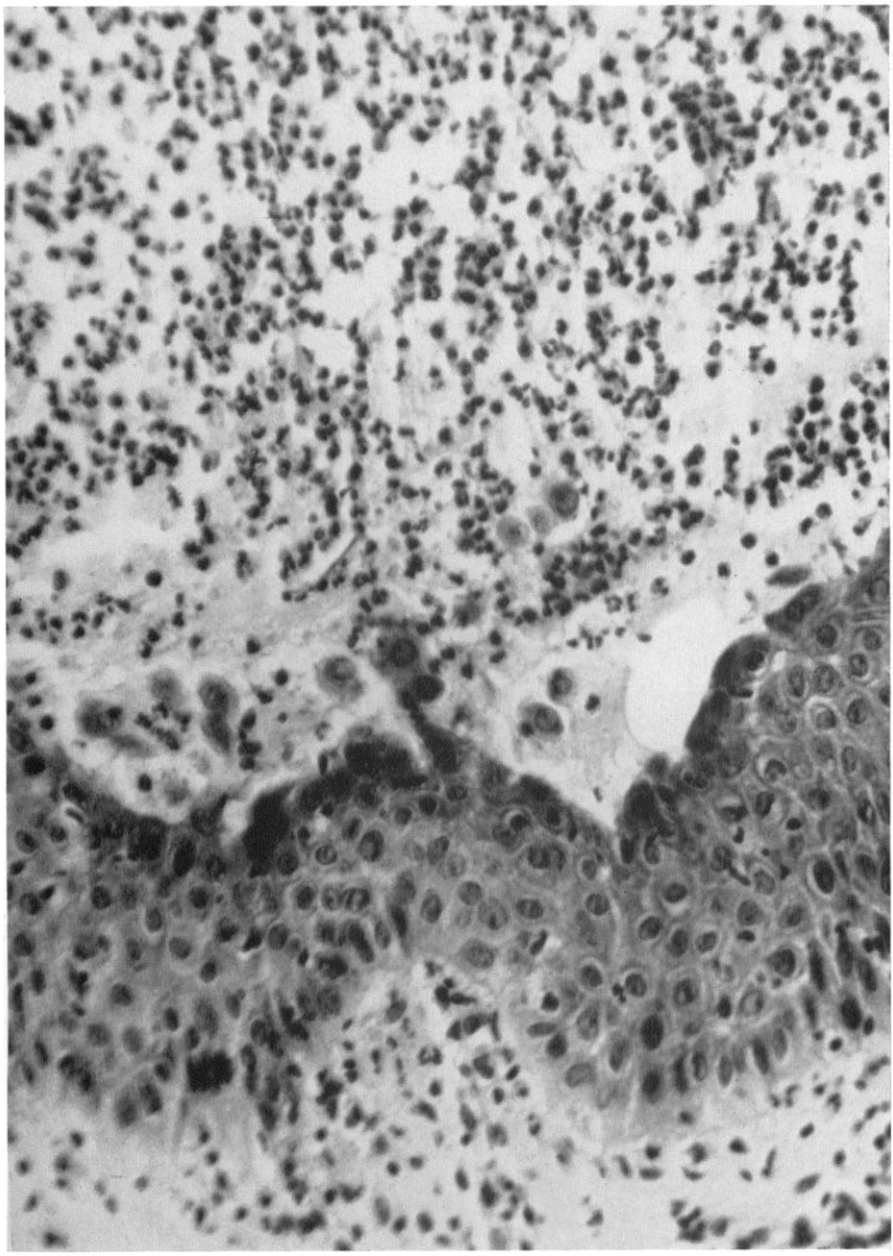

FIG. 3

of the entire eruption after therapy with sulfapyridine (0.5 Gm. q.i.d.) for 7 days. The sulfapyridine was then stopped. Four days later there was a noticeable relapse of the lesions.

COMMENT

The main features of this disorder are onset in middle age, usually in women, of a chronic, recurrent, superficial, usually asymptomatic vesiculopustular eruption, involving mainly the axillary regions, groins and flexor aspects of the proximal parts of the limbs. The hands, feet, face and mucous membranes are spared.

The primary lesion is a superficial vesicle or pustule which ruptures after a few days, leaving a scale or crust. With the successive development of new pustules in groups, annular and gyrate patches are formed with actively spreading edges

and central healing. No atrophy or scarring is present, but moderate pigmentation may occur. Phases of alternate quiescence and activity, lasting a few weeks, are the rule, although complete but temporary spontaneous remission may occur. The eruption is generally asymptomatic, but some patients may have moderate itching, which appears to have no effect on the general health of the patient.

No abnormality in blood counts, serology and blood chemistry have been reported. Culture of the contents of intact pustules may be sterile or yield *Staph. albus* or *aureus*.

The pathognomonic histologic feature of all cases has been the subcorneal vesicle containing numerous polymorphonuclear leukocytes. Although the British authors report no such change as acantholysis in the epidermal cells, biopsy sections from both our patients showed a few acantholytic cells at the bases of bullae.

Subcorneal pustular dermatosis is confused most often with the pustular variety of dermatitis herpetiformis. Both conditions have in common a protracted course, grouping of lesions and a similar favorable response to the sulfones and sulfapyridine. However, the usual lack of itching, the predominantly flexural distribution, especially in the axillae and groins, and the characteristic subcorneal pustule distinguishes the subcorneal dermatosis from Duhring's disease. Whereas histologically, subcorneal pustular dermatosis and impetigo herpetiformis are similar, the usual sterility of the lesions of the former, its lack of response to local and systemic antibiotics and benignity differentiates it from the latter. In benign familial pemphigus (Hailey and Hailey), the essential pathology occurs in the stratum malpighii, not subcorneally, and consists of extensive partial acantholysis with dyskeratosis. In subcorneal pustular dermatosis there is no dyskeratosis, and usually no acantholysis. In our patients there was some acantholysis; however, it was scattered and much less marked than in Hailey's disease.

Local or systemic treatment with antibiotics does not influence subcorneal pustular eruption. In most of the reported cases, diaminodiphenylsulfone (dapsone) effectively cleared the skin within one week (50 mg, 1–2 times per day). Sulfapyridine was also effective in some cases, but generally the improvement was slower. Liquor arsenicalis, thorium-x and Gantrisin® are useful occasionally.

SUMMARY

The outstanding clinical and pathologic features of subcorneal pustular dermatosis occurring in 2 Negro women are summarized.

In the past, these cases have been grouped with dermatitis herpetiformis, impetigo herpetiformis and other entities. Subcorneal pustular dermatosis, so-named by British authors, has distinctive features, can be easily recognized and, we believe, is a separate entity.

REFERENCES

1. Sneddon, I. B. and Wilkinson, D. C.: Subcorneal pustular dermatosis. Brit. J. Dermat., **68:** 385–394, 1956.

Note: Since completing this paper, Greenbaum, C. H. and Lee, J. B. have published on Subcorneal Pustular Dermatosis, Arch. Dermat. & Syph., **77:** 512–515, 1958.